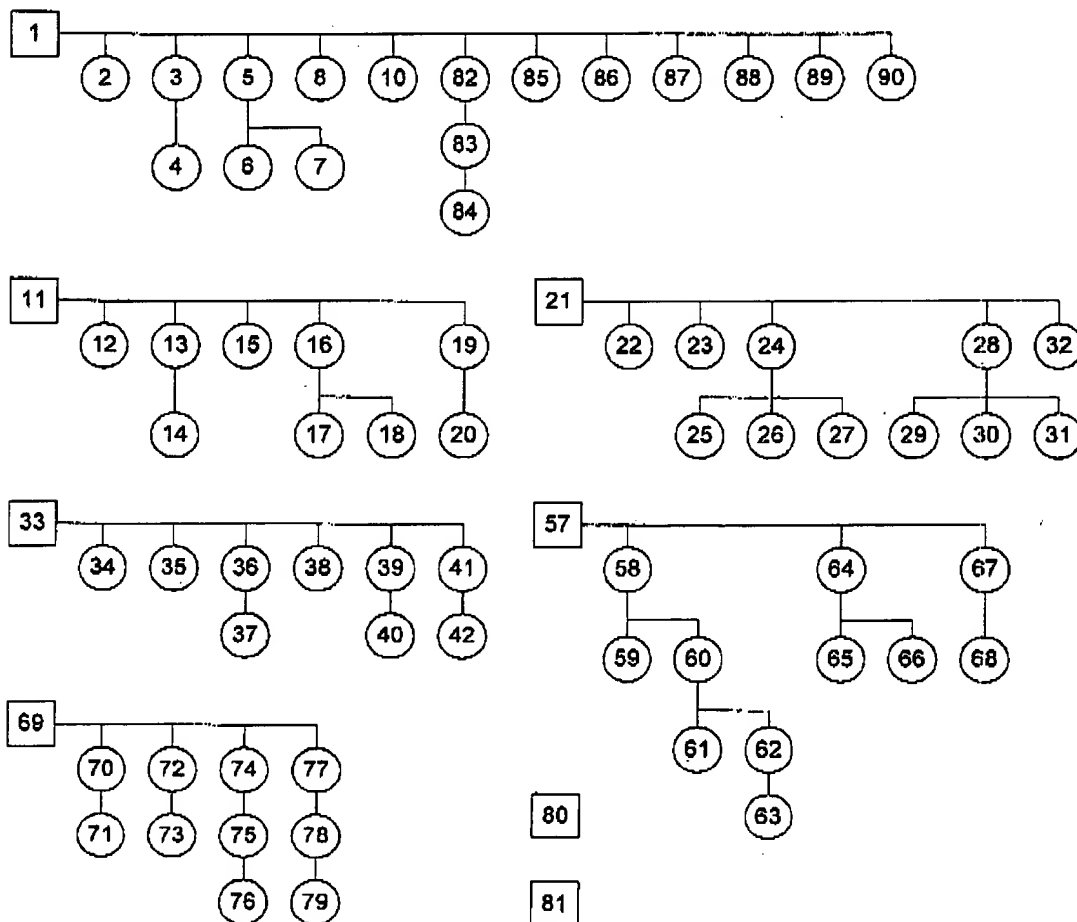


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### REMARKS

Reconsideration of the application is respectfully requested. An Office action mailed October 21, 2004 is pending in the application. Applicants have carefully considered the Office action and the references of record. In the Office action, claims 1-8, 10-42 and 57-87 were rejected under 35 U.S.C. § 103, and claims 1-8, 10-42, and 80-87 were further rejected on nonstatutory double patenting grounds. In this response to the Office action, claims 1, 8, 11, 21, 23, 33, 57, 69, 80 and 81 have been amended, and claims 88-90 have been added. Therefore, claims 1-8, 10-42 and 57-90 are pending in the application. The following diagram depicts the relationship between the independent and dependent claims.



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Rejections Under 35 U.S.C. § 103 of the Independent Claims

Each of the independent claims 1, 11, 21, 33, 57, 69, 80 and 81 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,086,628 to Dave et al. (hereinafter *Dave*) in view of U.S. Patent No. 5,282,202 to Bernstein et al. (hereinafter *Bernstein*) and further in view of U.S. Patent No. 6,356,945 to Shaw et al. (hereinafter *Shaw*). However, the Manual of Patent Examining Procedure (M.P.E.P.) states that, to support the rejection of a claim under 35 U.S.C. § 103(a), each feature of each rejected claim must be taught or suggested by the applied prior art, and that each of the words describing the feature must be taken into account.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. ... All words in a claim must be considered in judging the patentability of that claim against the prior art.

(M.P.E.P. § 2143.03, emphasis added). Each of the independent claims 1, 11, 21, 33, 57, 69, 80 and 81 as amended herein includes at least one feature not taught or suggested by *Dave*, *Bernstein* or *Shaw*, alone or in combination, and is therefore patentable for at least this reason.

In particular, each of the independent claims 1, 11, 21, 33, 57, 69, 80 and 81 is amended herein to further clarify the nature of composite frames in embodiments of the invention, including the nature of composite frame allocation. For example, claim 1 as amended requires that a composite frame nesting tree be constructed, that the composite frame nesting tree specify composite frames including nested subframes, and that composite frames be allocated in accordance with the composite frame nesting tree.

Constructing a composite frame nesting tree specifying composite frames comprising nested subframes ... allocating composite frames ... in accordance with the composite frame nesting tree.

(Independent claim 1, as amended). As shown in Figure 4B of the application, composite frames such as composite frame 420 may be complex. Such complex frames may be problematic for conventional frame allocation.

An allocator for the present purposes can allocate more complex frames than those for application 777.183usl ... Fig. 4B symbolizes a complex data frame 420 for use with the example pipe 400 of Fig. 4A.

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(Specification page 10, lines 17-20). Resolution of complex dependencies may be achieved through the construction of one or more composite frame nesting trees such as the composite frame nesting tree 430 shown in Figure 4C.

Streaming data frames through a pipe using a single overall physical frame such as F421 [of Figure 4B] requires that stream manager 340, Fig. 3, provide the frame's memory management and control. This requires resolving the frame allocator's dependencies, which can be done by building the nesting trees such as 430 [of Figure 4C].

(Specification page 10, lines 17-20). The correspondence between the composite frame nesting tree 430 and the composite frame 420 is further described in the specification with reference to Figures 4B and 4C, for example, from page 10, line 19 to page 11, line 12. Even if, for purposes of applying *Shaw* to the claims, the compressed subframes of *Shaw* are said to be a composite frame, *Shaw* does not teach allocating composite frames in accordance with the composite frame nesting tree of the claims. In fact, neither *Shaw* nor *Dave* nor *Bernstein*, nor any of the prior art of record, alone or in combination, teaches or fairly suggests the claimed relationship between composite frames and composite frame nesting trees. Therefore, the rejection under 35 U.S.C. § 103(a) of claims 1, 11, 21, 33, 57, 69, 80 and 81 should be withdrawn.

#### Independent Claim Rejections On Nonstatutory Double Patenting Grounds

Each of the independent claims 1, 11, 21, 33, 80 and 81 were further rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of commonly owned U.S. Patent No. 6,748,440 to Lisitsa et al. (hereinafter *Lisitsa*). The M.P.E.P. states that the reasoning supporting an obviousness-type double patenting rejection parallels the reasoning used to support a rejection under 35 U.S.C. § 103(a).

The analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. 103(a) rejection.

(M.P.E.P. § 804, paragraph II.B.1). *Lisitsa*, alone or in combination with the prior art of record, fails to teach or fairly suggest the claimed relationship between composite frames and composite frame nesting trees. For at least this reason, the obviousness-type double patenting rejection of claims 1, 11, 21, 33, 80 and 81 should therefore be withdrawn.

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However, in the interests of expediting prosecution of the present application, a terminal disclaimer with respect to *Lisitsa* is filed herewith for entry by the Examiner if the obviousness-type double patent rejections are not withdrawn.

Rejections Under 35 U.S.C. § 103 of Selected Dependent Claims

Although each of dependent claims 82-87 was rejected under 35 U.S.C. § 103(a) over *Dave* in view of *Bernstein* and further in view of *Shaw*, the particular part or parts of these complex references that were relied on for the rejections were not designated in the Office action, neither was the pertinence of the references explained with respect to these claims. In fact, dependent claims 82-87 were not discussed at all in the Office action beyond the statement that they were rejected. However, the M.P.E.P. states that when a reference is complex or shows or describes intentions other than that claimed by Applicants, the particular part relied on must be designated as nearly as practicable, and, in addition, that the pertinence of each reference must be clearly explained and each rejected claim specified.

In rejecting claims for want of novelty or for obviousness ... when a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference ... must be clearly explained and each rejected claim specified.

(37 C.F.R. § 1.104(c)(2), emphasis added). Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) of each of dependent claims 82-87 be brought into compliance with 37 C.F.R. § 1.104(c)(2) or else that the rejection be withdrawn.

Frame Control Tables, Restructuring Modules and Data Sourcing Operations

The Office action requested details with respect to frame control tables, restructuring modules and data sourcing operations. Although the statutory requirement or rule under which the request was made is unclear, the details below are nevertheless presented for the Examiner's benefit.

Figure 8 of the present application shows frame control tables 800. (Specification page 16, lines 21-22). The frame control table may be checked to determine whether modules that supply data to a same downstream module have completed their operations

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on a particular frame. (Specification, page 17, lines 8-10). For example, the frame control table may contain a flag for each entry indicating whether each module has processed the particular frame. (Original claim 13). To deal with the case where multiple pipes pass through the same module, frame control tables may be associated with individual module pins rather than with the modules themselves. (Specification, page 17, lines 27-29).

The term "restructuring" as used herein refers to operations that alter the frame structure of the data associated with the operations such as mixing and splitting operations. (Specification, page 9, lines 14-16). In contrast, non-restructuring operations merely transform the data without altering the frame structure. (Specification, page 9, lines 11-12). Examples of restructuring modules include modules having three or more pins for splitting frames of streaming data, mixing frames of streaming data and possibly both at the same time. (Specification, page 9, lines 12-14).

As described with reference to Figure 6B, a data-sourcing operation is an operation to source data from outside a module to fill a subframe associated with the module. (Specification, page 17, lines 1-3).

#### The Remaining Dependent Claims

The remaining dependent claims are allowable for at least the same reasons that the eight independent claims 1, 11, 21, 33, 57, 69, 80 and 81 are allowable in that the dependent claims incorporate the features of the independent claims. Nevertheless, the dependent claims further define subject matter not shown or rendered obvious by the prior art of record. Because the independent claims are allowable over the applied prior art, applicants do not believe remarks addressing this further subject matter are necessary herein.

#### Newly Added Claims

Claims 88-90 have been added in this amendment to more particularly point out and distinctly claim the invention as described by the specification. In compliance with 37 C.F.R. § 1.121(f), they do not add new matter.

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CONCLUSION

The application is considered in good and proper form for allowance, and the examiner is respectfully requested to pass this application to issue. If, in the opinion of the examiner, a telephone conference would expedite the prosecution of the subject application, the examiner is invited to call the undersigned attorney.

Respectfully submitted,



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